CLAIMS

What is claimed is:

1. A carbide component for a boring tool, said carbide component comprising:

a body portion comprising carbide, said body portion having a first end adapted for being seated in said boring tool and a second, working, end;

wherein said second end of said compact has an outer layer which is attached to said body without a transition layer or adherent material and which contains an ultra-hard material.

2. The carbide component of Claim 1, wherein said carbide component has a binder content of less than 13%.

3. The carbide component of Claim 1, wherein said carbide component has a binder content of less than 11%.

4. The carbide component of Claim 1, wherein said carbide component is a hemispherical insert.

5. The carbide component of Claim 1, wherein said ultra-hard material is bare diamonds.

~~6. A drilling tool~~, comprising:

a first end adapted for attachment to a drill string;

a second end, opposite said first end, containing at least one carbide component, said carbide component comprising

a body portion comprising carbide, said body portion having a first end adapted for being seated in said drilling tool and a second, working, end;

wherein said second end of said carbide component has an outer layer which is attached to said body without a transition layer or adherent material and which contains an ultra-hard material.

7. The bit of Claim 6, wherein said carbide component has a binder content of less than 13%.

8. The bit of Claim 6, wherein said carbide component has a binder content of less than 11%.

9. The bit of Claim 6, wherein said carbide component is a hemispherical insert.

10. The bit of Claim 6, wherein said ultra-hard material is bare diamonds.

11. A drill rig, comprising:

a drill string containing at least one section of pipe;

a drilling tool connected to said drill string and containing at least one carbide component; and

surface equipment capable of rotating said drill string and said drilling tool;

wherein said carbide component comprises a body portion of carbide and an outer layer which is attached to said body without a transition layer or adherent material and which contains an ultra-hard material.

12. The rig of Claim 11, wherein said carbide component has a binder content of less than 13%.

13. The rig of Claim 11, wherein said carbide component has a binder content of less than 11%.

14. The rig of Claim 11, wherein said carbide component is a hemispherical insert.

15. The rig of Claim 11, wherein said ultra-hard material is bare diamonds.

16. A fabrication method for a carbide component, comprising the steps of:

forming a body portion comprising tungsten carbide;

sintering said body portion sufficiently to permit handling of said body portion for further processing;

applying a coating to a working surface of said body portion, said coating comprising an ultra-hard material;

after said applying step, subjecting said body portion and said coating to a high-temperature, high-pressure process to form a finished carbide component;

installing said finished carbide component in a drilling tool.

17. The method of Claim 16, wherein said ultra-hard material is bare diamonds.

18. The method of Claim 16, wherein said coating is approximately 0.010" thick.

19. The method of Claim 16, wherein said body portion has a binder content of less than 13%.

20. The method of Claim 16, wherein said carbide component has a binder content of less than 11%.